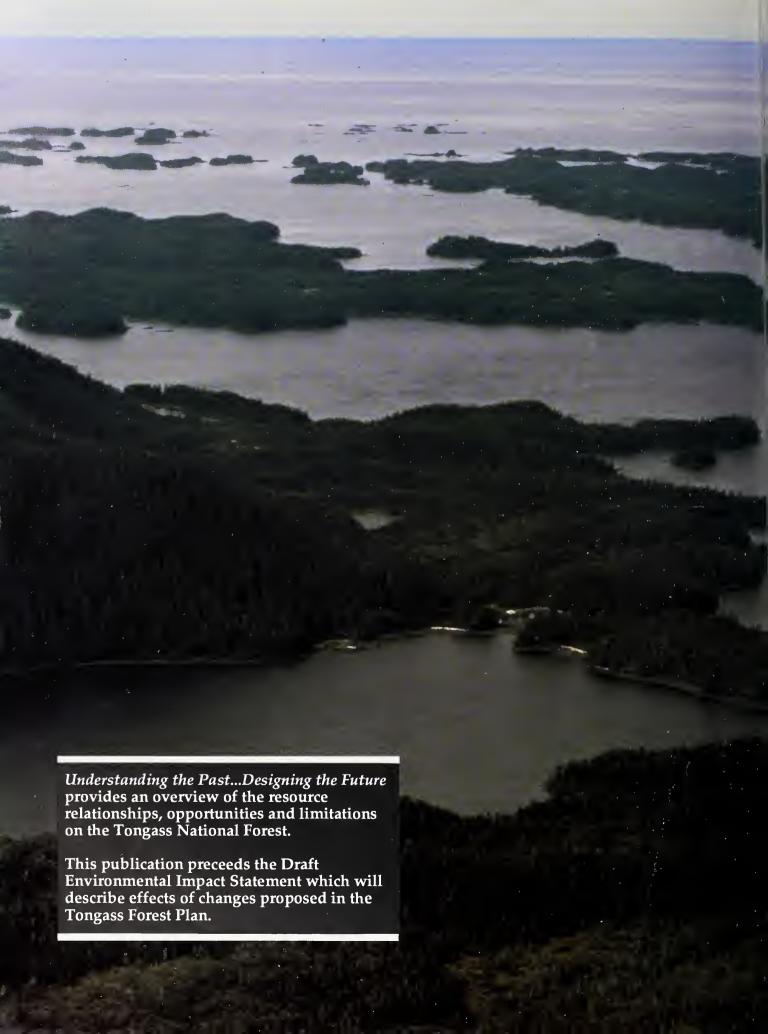
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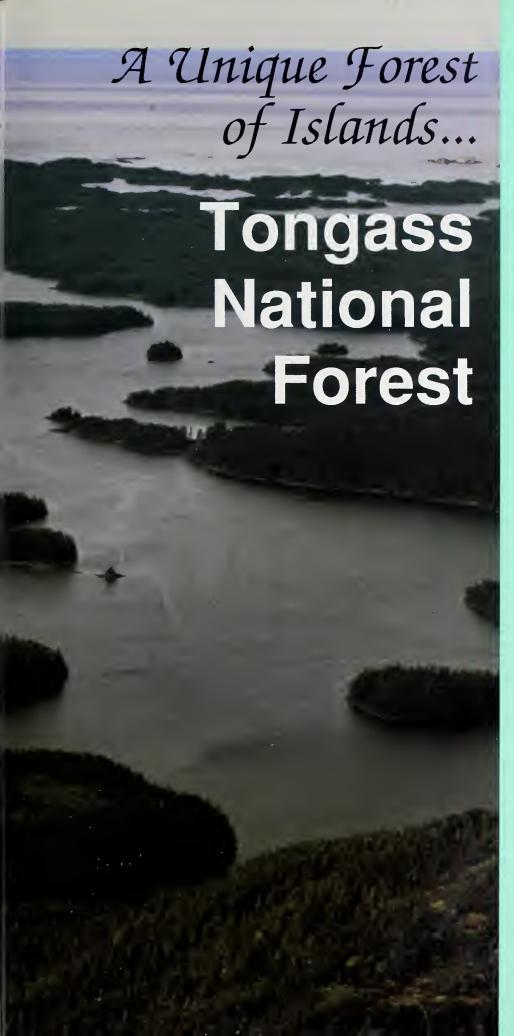
Do not assume content reflects current scientific knowledge, policies, or practices.



25DII.R23#85 Understanding the Past. ...Designing the Future

United States Department of Agriculture





Understanding the Past...

Alaska has always been known as a wild and magnificent place, a vast expanse of seemingly limitless scenery and rich natural resources. People who have never even seen Alaska think of it as the Last Frontier.

Demand for the enjoyment of Alaska's scenery and the use of its resources has grown considerably

over the years.

In Southeast Alaska, much of that demand has focused on the Tongass National Forest.

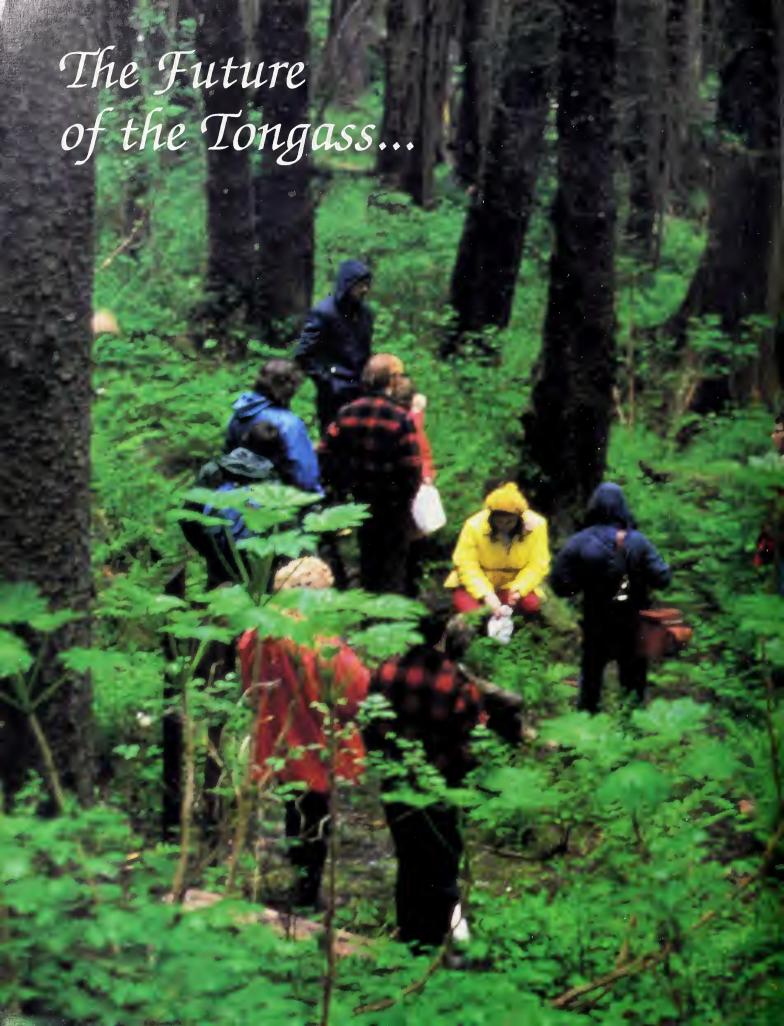
...Designing the Future

Making decisions about how to manage the Tongass National Forest, so that present and future generations will benefit from its richness, is quite challenging.

The Forest Service hopes that the following pages will provide you valuable information about the lifestyles of Southeast Alaskans and about the history of the area.

We also hope to provide you with a clearer picture of the relationships between Southeast Alaska and the Tongass National Forest.

We believe this publication will help you understand the opportunities and very real limitations this Region's natural resources present and the challenge of managing these resources.





Understanding the Tongass...

The People

Understanding the Tongass means understanding the people who live and work here, and those who simply dream of seeing The Last Frontier. They all have a stake in the Tongass National Forest.

The Past

Understanding the Tongass means understanding its history-a chain of events that has led the Forest to where it is today. Perhaps nowhere else in the Nation do legislation and Forest Service management policies and practices affect a region or its people to the extent that they do in Southeast Alaska and the Tongass National Forest.

The Future

To begin planning the Tongass of the future, it is important to understand the possibilities and limitations of resources on the Tongass.

Opportunities for Change

The Tongass is rich with a variety of resources. Forest Service policies and management practices provide many opportunities for a mix of uses of these resources.



















Where to look...

where to look
The People6
The Past12
The Future30
Opportunities for Change50

Understanding the Tongass...



"My family eats fish several times a week. What we don't need, we share with family and neighbors. Fishing and hunting mean more to us than just food on the table, though. They are part of our family history and tradition."





...is understanding Alaska's people...



"I've enjoyed the beauty of Alaska all my life, and want others to enjoy it too. I think it's okay to cut trees, but I want to be sure the overall beauty of my home is preserved." "The Tongass provides the most awe-inspiring and unique wilderness recreation and wildlife viewing left in this country. Tourism and recreation can soon grow to be the dominant sustainable industry here, if we balance forest management."

"I believe it is really important to maintain a strong fishing industry; it's a vital element in a balanced economy. We need to be careful not to allow logging practices that harm fishing by damaging the salmon spawning streams."

"I want my kids to enjoy Alaska's beauty too, but trees grow back and there are plenty of them in Alaska! Logging is the way I support my family and the life we enjoy."









Understanding the Tongass...



"The majesty of a soaring eagle, the intensity of a bear fishing for salmon - these are the things I look for in my work. They are treasured parts of our heritage that we just can't risk losing. It's great to look out over this vast, unspoiled country and realize there are still areas untouched by humans. We need to ensure that it stays that way."



...is understanding Alaska's natural resources...



"We really appreciated the beauty of the vast forest we have seen on our trip. We heard a lot about timber harvesting on the Tongass and our only concern is that there will be forests for the future." "The Tongass National Forest contains immense mineral resources. I think that using today's technology we can successfully mine these minerals and preserve the environment."

"There are still many unknowns regarding the ups and downs of fish populations and the effect activities will have on fisheries. I'd like to feel sure that potential impacts to fish habitat are carefully considered."



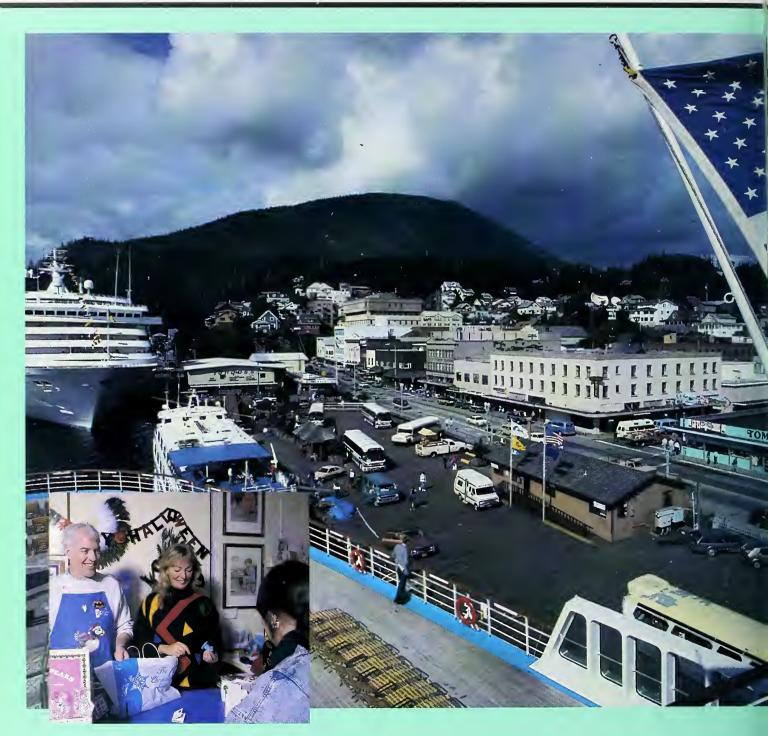
"I know we need to cut timber to help the economy and because we need lumber but we also need to think more about the future of the environment. I'm just not sure we can have both."







Understanding the Tongass...



"The cruise ships sail throughout the Tongass on their trips to Southeast Alaska. If the beauty of the forest is damaged, many tourists will stop coming and I will have trouble staying in business."

...is understanding how Alaskans make a living — and...



"When I'm out in the woods, I see healthy regeneration not desecration. My job and almost 100 others here at the mill shouldn't have to depend on someone's perception of what's pretty, but rather on something that has proven itself--namely the forest and its incredible capacity to renew itself."





Understanding the Tongass...



1908

Tongass National Forest proclaimed 1947

Congress authorizes longterm timber sales 1959

Statehood — Alaska becomes the 49th state... 1971

Alaska Native Claims Settlement Act passes...

...is understanding the history of the Tongass



1979

Tongass Land Management Plan is signed... 1980

ANILCA legislation is passed by Congress... 1982

Emergence of Pacific Rim economy and Native corporations 1989

Tongass issues revisited

1908

Congress designates the Tongass National Forest

National Forests

Origins of the National Forests and the Forest Service trace back to 1891, when Congress established forest reserves to "set apart and reserve ... public lands wholly or in part covered with timber or undergrowth ... as public reservation." In 1905, Congress transferred virtually all responsibility for the reserves to the Department of Agriculture's Division of Forestry. The Division was renamed the Forest Service, and in 1907, the forest reserves became National Forests.

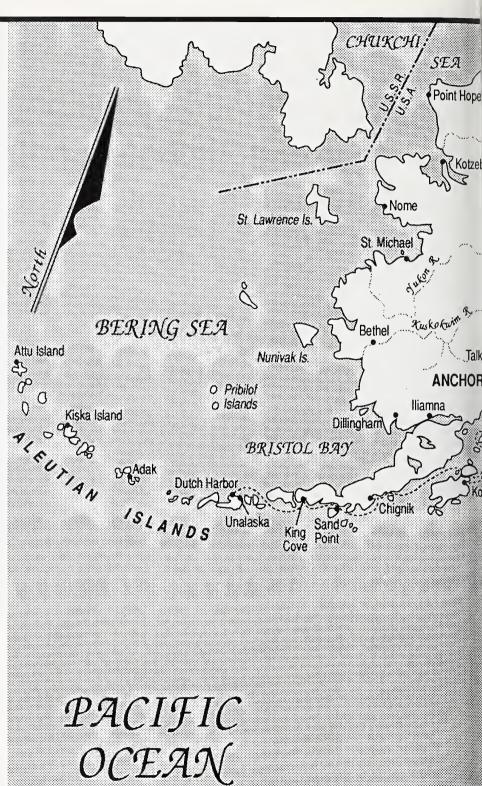
The Tongass

The beginnings of the Tongass actually date to 1902 when the Alexander Archipelago Forest Reserve was established.

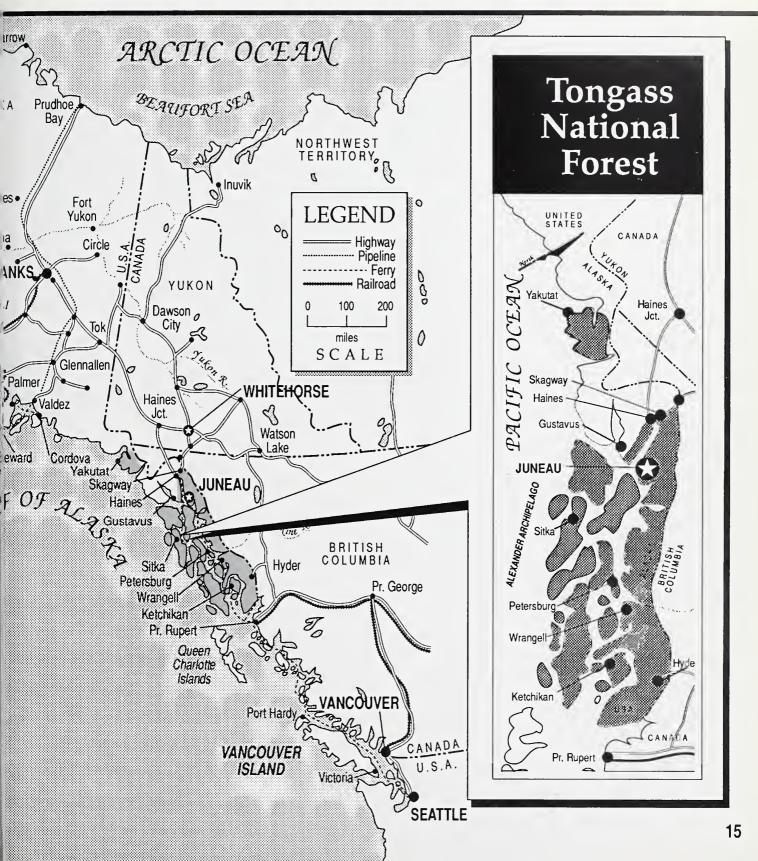
Five years later, the Tongass was added to the National Forest System. In 1908, the Tongass and the Alexander Archipelago Forest Reserve were consolidated by presidential proclamation into a single National Forest, the Tongass.

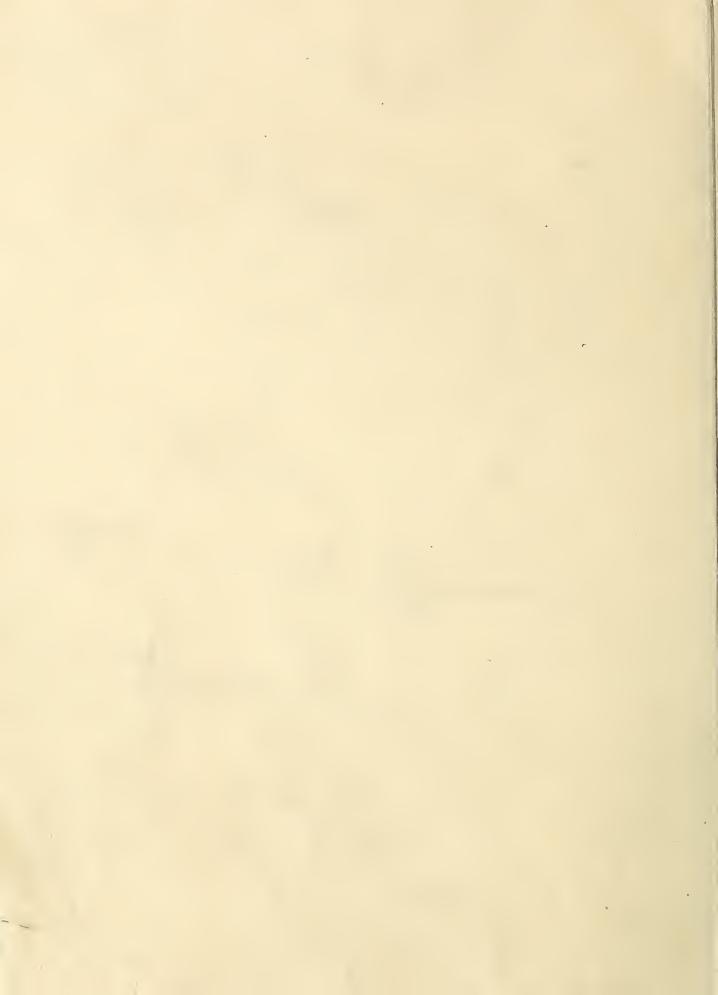
Then, as now, the Tongass is the largest National Forest in the country.

At 16.9 million acres, the Tongass stretches from vast inland icefields to the Pacific Ocean.









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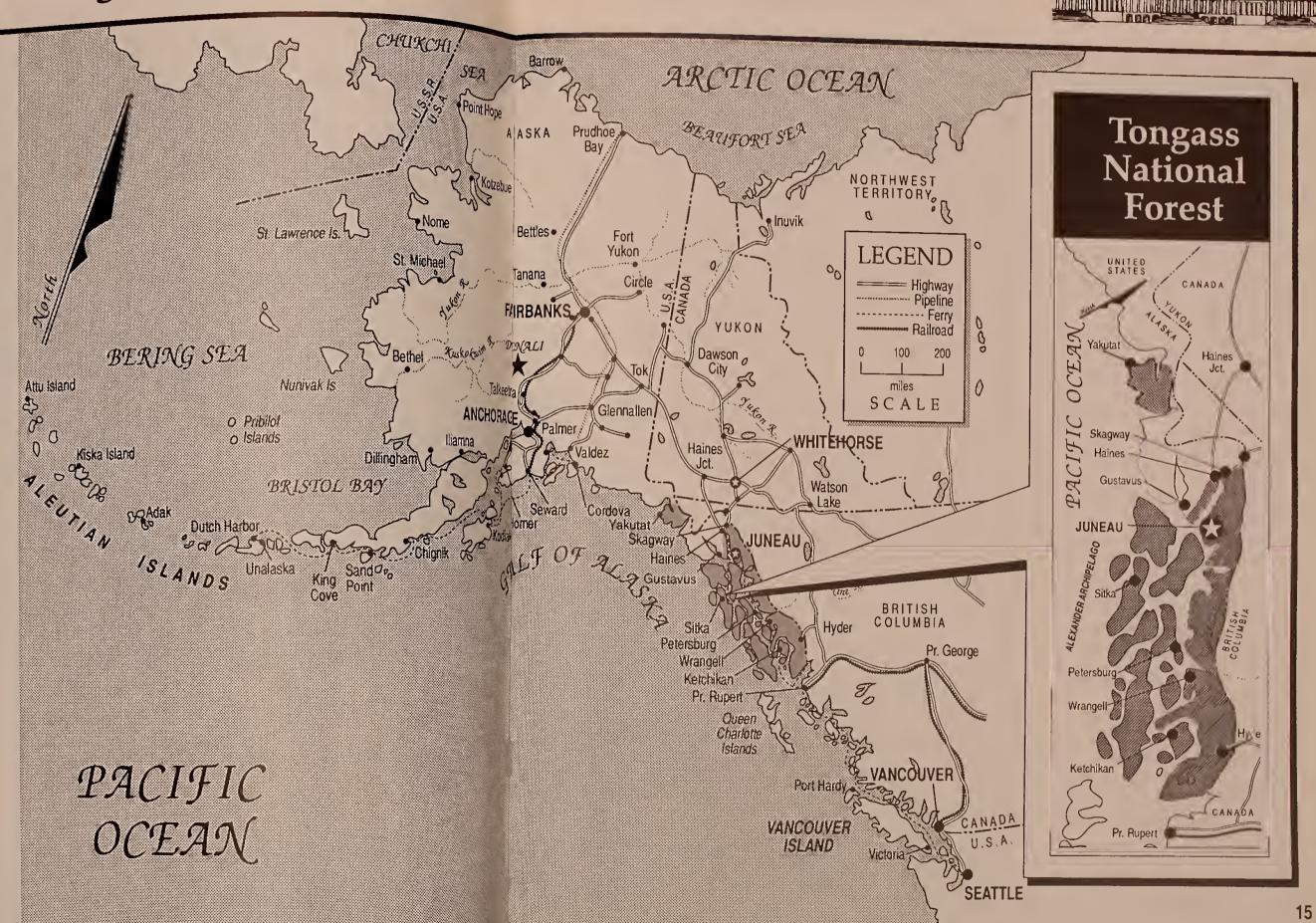
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Congress authorizes long-term timber sales

The Dilemma

By 1947, World War II was over. The post-war economy was booming and demand for wood products in the United States and overseas was at an all-

time high.

Japan lost nearly 45 percent of their forested acreage during The War and was in desperate need of wood products. They petitioned the U.S. government to make timber available in Southeast Alaska.

In Alaska there was plenty of timber but no timber industry. How could industry be persuaded to build mills in a remote, wild land where it might take decades to turn a profit?

Alaskans needed jobs. Japan needed wood. Industry needed incentives to risk construction of mills in Alaska. What should be

done?

The Solution

To raise financing, industry needed a guarantee that timber would be supplied to their mills. In response to the post-war boom, Japanese interest in Alaska timber, and the desire to establish a stable industry in Southeast Alaska, Congress authorized the Forest Service to develop this guarantee.

The Forest Service offered four long-term 50-year timber sale contracts. Combined, these









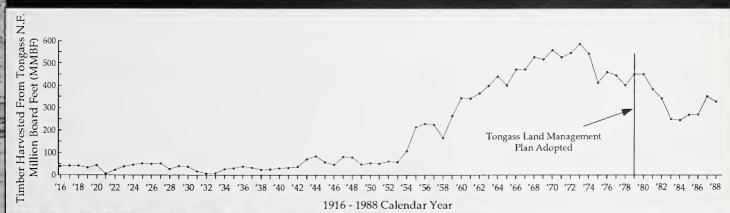
contracts would have supplied a total of nearly 23 billion feet of timber over the life of the contracts.

Soon, pulpmills were built in Ketchikan and Sitka with sawmills in Wrangell, Juneau and Petersburg. Logging camps and small communities began to dot the Alaska shoreline.

Two of the four contracts are in effect today, Ketchikan Unit (Ketchikan Pulp Company) and Sitka Unit (Alaska Pulp Corporation).

Today, the Forest Service must manage the Tongass to meet everincreasing demands for Forest resources and to meet contractual obligations.





1959

Statehood — Alaska becomes the 49th state

President signs proclamation

President Dwight D. Eisenhower, on January 3, 1959, signed the proclamation making it official —Alaska was the 49th State in the Union!

As part of its newfound status, Alaska had a right, under provisions of the Alaska Statehood Act, to select more than 100 million acres of federal land, for State ownership. This was an area roughly the size of California.

Alaska selects lands

Since passage of the Statehood Act, Alaska has selected a mix of lands to further community and economic development.

Among the lands selected were the now-famous Prudhoe Bay oil fields which provide the bulk of State revenues.

The Statehood Act allowed Alaska to select up to 400 thousand acres of National Forest land for community expansion and recreation.

To date, nearly 154 thousand acres have been conveyed to the State from the Tongass National Forest. The selection period ends in January 1994.







Land selections bring more changes

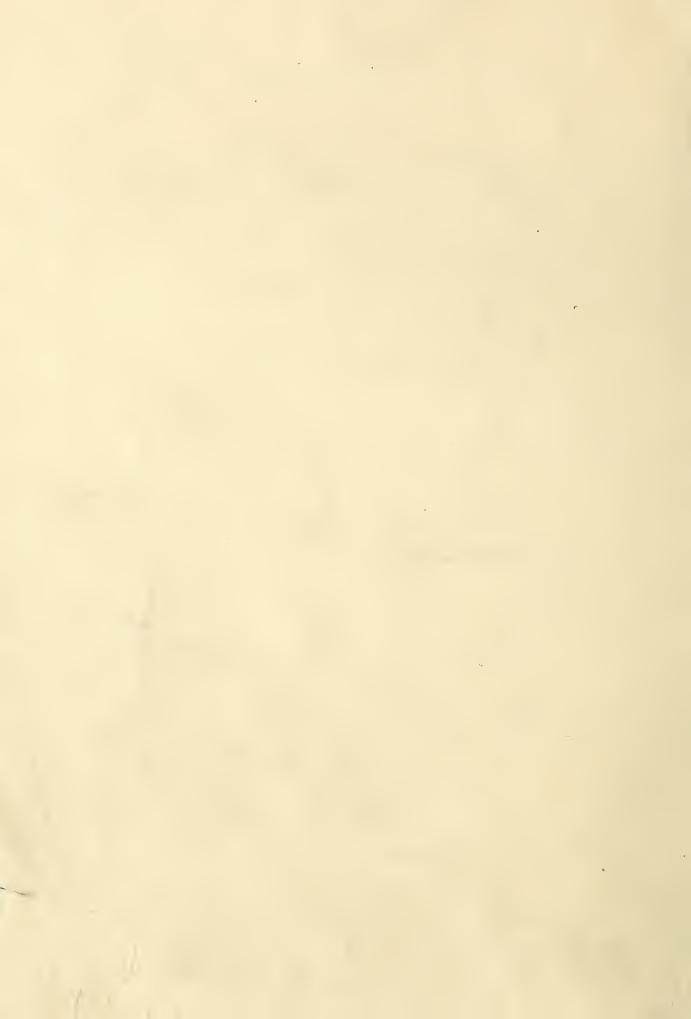
Land selections by the State are bringing about dramatic change on the Tongass.

Before statehood, most communities within the Tongass National Forest had limited ability to expand because little private land was available; there were few opportunities to establish new communities.

Today, as a result of State selections, several new communities are emerging throughout the Tongass. Each is striving to define its character, to establish its economy and to provide for the basic needs and wants of its residents.

As community populations continue to grow, demands are increasing for often conflicting uses of forest resources.

Providing for the needs of emerging communities on the Tongass is a challenge for National Forest managers.



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1971

Alaska Native Claims Settlement Act passes

Act hailed as great benefit to Native Alaskans

The Alaska Native Claims Settlement Act, or ANCSA, was passed by Congress in 1971. At the time it was hailed as the most liberal settlement Native Americans have ever achieved with the Federal Government.

Statewide, ANSCA divided about 44 million acres and nearly \$1 billion in cash between regional, urban, and village Native corporations. These corporations were established to manage the assets. To date, about 94 percent of the 44 million acres have been conveyed to the Native corporations.

The Act also provided that each Native born on or before December 18, 1971, would receive a hundred shares of stock in village and regional corporations.

Entitlements go to Tongass villages

The Southeast Alaska
Regional Corporation, Sealaska,
is headquartered in Juneau.
There are also two urban
corporations, Shee Atika in Sitka
and Goldbelt in Juneau. There
are ten village corporations
scattered throughout Southeast
Alaska.





Daily News

CEMBER 20, 1971

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Combined, the 13 Southeast Alaska Native corporations are entitled to about 560 thousand acres on the Tongass. To date, about 494 thousand acres have been conveyed to Southeast Native corporations.

National Forest lands selected by the new corporations were often located next to Native villages. Generally, Native corporations selected lands for traditional uses and those rich with economic natural resources such as timber and minerals.

Discussions

The basic rules and provisions of ANCSA have not changed substantially since its passage. However, Congress has amended the Act several times over the years resulting in adjustments of final entitlements for each corporation.

These changes can result in transfer of public land to Native corporations. Public forest land today may be private land tomorrow. This presents a unique challenge to managers of the Tongass National Forest.



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Nixon Signs Claims

DECEMBER 20, 1971

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Examiner Sa To WAL-America Merger Plans

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First Tongass Land Management Plan signed

The Tongass Land Management Plan

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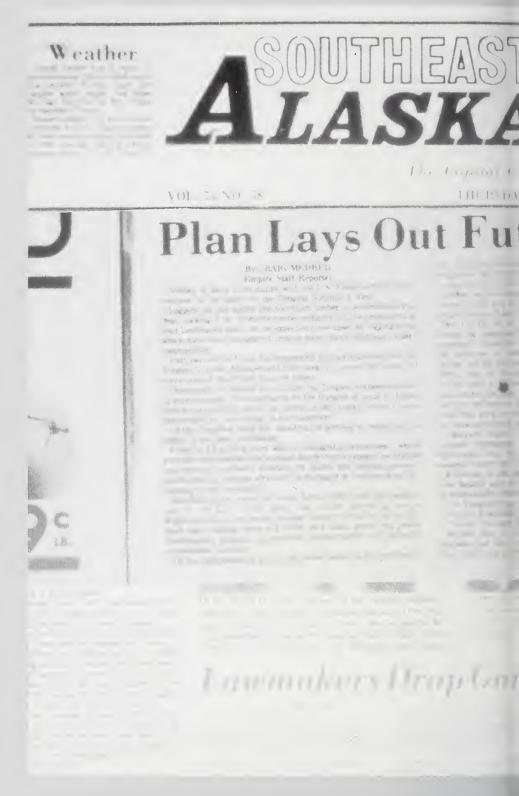
The Plan was developed to provide workable solutions for the many and complex management problems on the Tongass. It considered all forest resources.

Community stability, logging, wilderness designation and effects of activities on wildlife and fisheries were major concerns addressed in the Plan.

The Plan was the first National Forest Plan developed following the National Forest Management Act.

The National Forest Management Act, passed in 1976, requires the Forest Service to prepare a land and resource management plan for each National Forest in the United States. Each plan addresses fish and wildlife, recreation, timber, soil and water, and other multiple use values.

On the Tongass, it took three years of analysis and preparation by many resource specialists to develop the Tongass Land Management Plan. People from all walks of life participated in developing the Plan. There was give and take, speaking and listening, and in most cases, eventual agreement on a workable solution. Although the public





was divided about the best course of action, it was believed by many to be a fair and balanced

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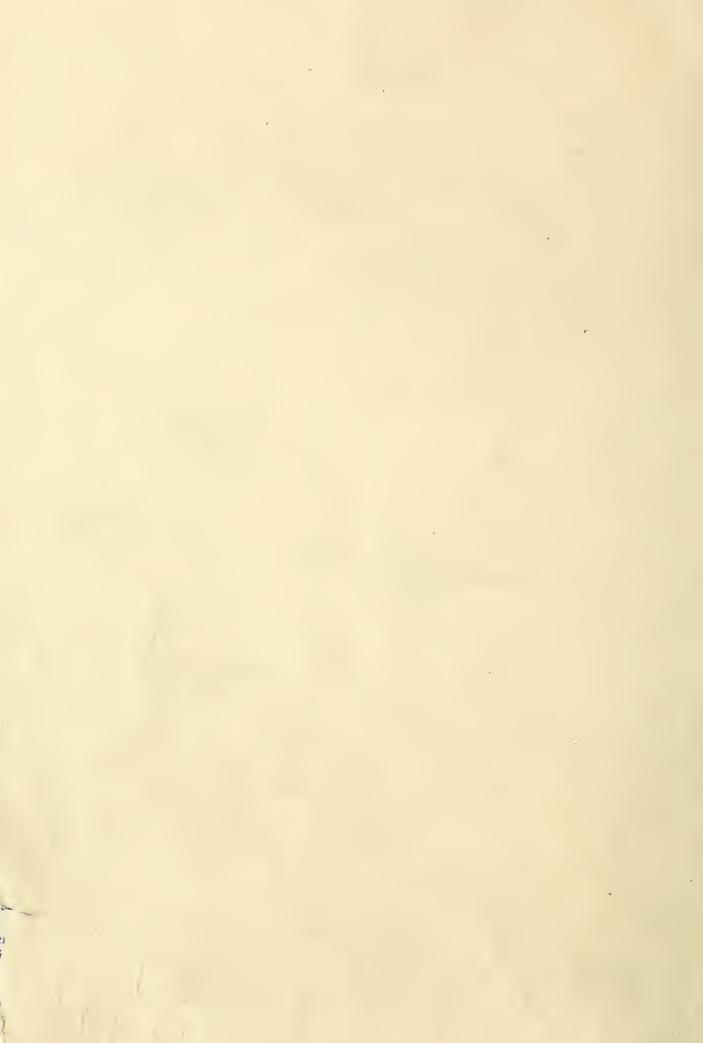
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Today, the Forest Service is taking a second look at management on the Tongass. The Plan is being revised. The Revision is intended to modify the Plan to reflect the changes that have taken place in Southeast Alaska-changes in public values, changes in market conditions, and changes in knowledge about forest management activities and

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Congress passes legislation for ANILCA

What is ANILCA all about?

One of the dramatic changes since approval of the Tongass Land Management Plan has been the Alaska National Interest Lands Conservation Act (ANILCA, or the Alaska Lands Act).

The map of Alaska and the way business is done on the Tongass changed substantially on December 2, 1980, when ANILCA was signed into law by President Jimmy Carter.

Suddenly, residents of the 49th State found themselves neighbors to more than 100 million acres of new National Parks, Wildlife Refuges, Wild and Scenic rivers, national conservation and recreation areas, wilderness areas, park preserves, and additions to the National Forests.

What differences ANILCA made

Timber Made Available

ANILCA provided funding and direction to help maintain historic timber employment levels. The Act makes available 4.5 billion board feet of timber each decade from the Tongass National Forest.

See Page 6



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VOL 74 NO 236

JUNEAU ALASKA

'Environmental bill of century'

President signs l

Emptre Wandington Bureau Washington the morners the immenously sets between the elecul usuals with to engineed bear degree weather as they redebrated the agraing of the measure Whereth dubbed the environmental bill of the century

throught would never new this day.
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Pro-environmenta: confreshors like Rep Morris Udall li-Airir, amed before a parked East Wing audience and halled a bilthat only months before they distribed as too well on development

President Jirony Carter Secretary of the Interior Certi Andros Littail Sen Henry Scoop Jackson D Wash and Rep John Semberling D-Ohio, united in their praise of the Lands bill as the cultives sell in the teamentment

History before in the highery of this nation have we setted the opportunity to preserve so much of Americs's butters and cultural benings on so grand a scale." President Carter told the rows pucked with the Eart Mong of the White House Ethank God von have made it premiste for nor to som

Carter brilled the bit million acres of waderness area to the legislation as truly this country a cross growest Alaska e meteral consultive the arbited is America e the the oper decade

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Bond vote By LAMBI KV KNO







Wilderness Designated

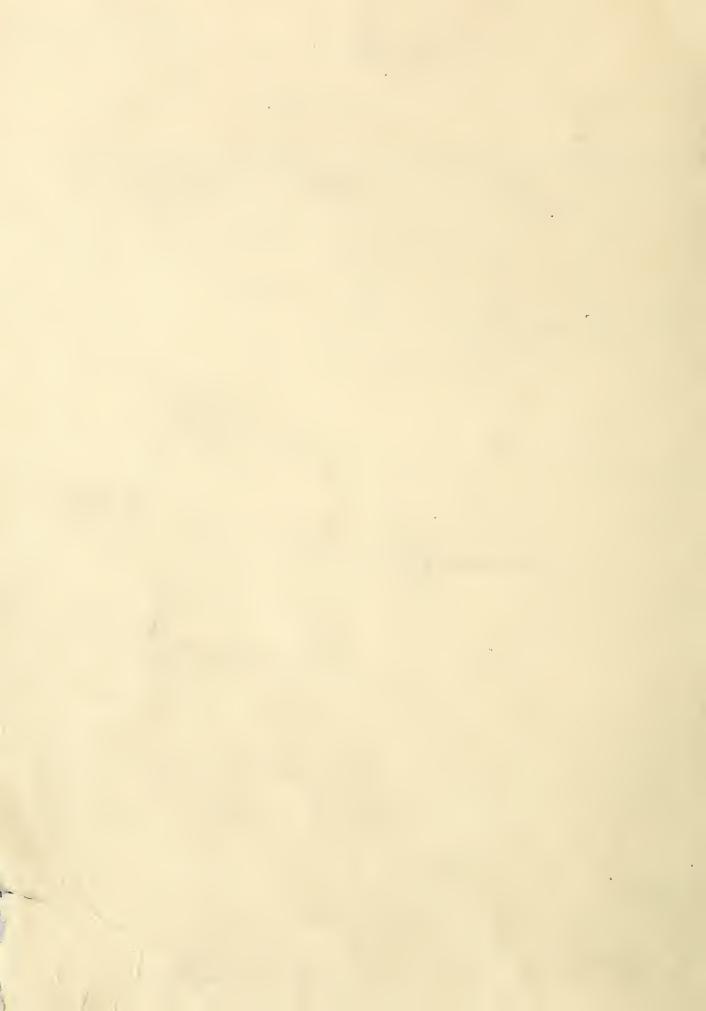
On the Tongass, ANILCA designated 5.4 million acres of Wilderness. Unlike wilderness areas on other forests, ANILCA allows fish enhancement work and the use of airplanes, motorboats and snow machines for traditional activities.

•Fund Created

To offset effects of Wilderness designation on the timber industry, the \$40 million annual Tongass Timber Supply Fund was created. The fund is used to pay for road construction and other activities to make timber harvesting in some non-wilderness areas more economical. The fund also supports scientific research on timber management in Southeast Alaska.

•Subsistence Recognized

Title VIII of ANILCA requires Federal agencies to provide the opportunity for rural residents engaged in a subsistence way of life to continue to do so. Subsistence is the customary and traditional use by rural Alaskan residents of wild renewable resources for direct personal or family use.



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VOL 74 NO 236

'Environmental bill of century'

President signs land bill

By NAMES SHEET.

WASHINGTON. The ain smuled on Washington this morning and backers of the Alaska lands bill mirrored the unscassonal 60 degree weather as their celebrated the signing of the measure. Thereity dubbed the environmental bill of the century. There

thought would never see this day.

Like the weather though their cheerfulness was fleeling.

Environmentalists theoried in their push for more environmentally protective lands bill by the bovernher conservative fleepublicar landslide publich imaged the bill's lightling as among the greatest achievements in conservation history with privately acknowledging they were disappointed with the fin-

Pro-environmenta. Impresente. like Rep. Morris. Coa. D. Amir. stood before a pecked bast Wing audience and hailed a hithat only mostly before they datumed as too soft on develope environment.

President Jerony Carter Secretary of the Interior Cert. Acorditional Sec. Henry School Jackson D. Wash and Rep. Leb. Seaberling (NObio matted in their praise of the Lands of Law Secretary entails but of the century.

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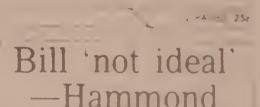
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Bond vote outcome up in air



•Wilderness Designated

On the Tongass, ANILCA designated 5.4 million acres of Wilderness. Unlike wilderness areas on other forests, ANILCA allows fish enhancement work and the use of airplanes, motorboats and snow machines for traditional activities.

•Fund Created

To offset effects of Wilderness designation on the timber industry, the \$40 million annual Tongass Timber Supply Fund was created. The fund is used to pay for road construction and other activities to make timber harvesting in some non-wilderness areas more economical. The fund also supports scientific research on timber management in Southeast Alaska.

•Subsistence Recognized

Title VIII of ANILCA requires Federal agencies to provide the opportunity for rural residents engaged in a subsistence way of life to continue to do so. Subsistence is the customary and traditional use by rural Alaskan residents of wild renewable resources for direct personal or family use.

1982

Emergence of Pacific Rim economies and Alaska Native Corporations

Trading partners across the Pacific

Much of the fish and timber harvested in Alaska is exported to Asian countries of the Pacific Rim. Timber is exported both as solid wood products and as dissolving pulp for making rayon and cellophane.

Salmon is the largest Alaskan fishery dependent on National Forest lands for spawning habitat. Salmon products are exported fresh, frozen and canned.

Japan is the largest customer for Southeast Alaska's timber and salmon. Other customers are Korea, China, Taiwan, Canada, South America, Europe, Southeast Asia, and the Middle East.

Alaska Native Corporations

By the early 1980's, resource activities on Native corporation lands and resources for economic purposes was well underway. In most cases this took the form of harvesting timber and exporting round logs directly to Pacific Rim countries.

Fluctuations in the Pacific Rim economy

The quantity and value of Alaska's exports are greatly influenced by exchange rates between the American dollar and Pacific Rim currencies, especially the Japanese yen.

When the value of the American dollar is high, compared to the Japanese yen, products manufactured in the United States become

expensive to Japanese consumers.

Federal export regulations require most timber harvested from the Tongass to be manufactured into sawn products or pulp before it can be exported. This is called primary processing. There is no primary processing requirement for timber harvested from non-National Forest lands.

Between 1978 and 1982, the dollar rose against the yen. This

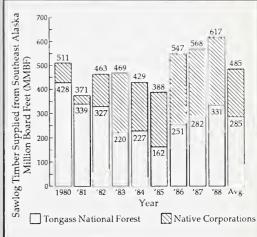


resulted in an expanding demand for logs exported from Native corporation lands. To meet this demand, Native corporation lands were harvested at a rapid rate. Meanwhile, the demand for finished wood products from National Forest lands declined. By the mid-1980's the economic situation in Pacific Rim countries changed. The value of the American dollar fell, making labor costs in the United States lower than in some Pacific Rim economies. For this reason Japan and other Pacific Rim countries want their logs processed in the United States where labor is currently less expensive.

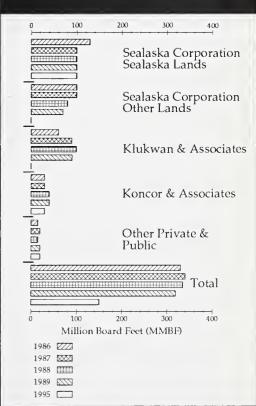
Since much of the supply of timber from Native lands is nearly harvested, it is expected that the rate of Native corporation harvest will decrease while the demand for timber from the Tongass will increase. Preliminary figures for 1989 indicate that Alaskan pulp producers may exceed all previous output levels as prices soar to record highs.



Proportion of Total Harvest from Tongass & Native Lands



Projected Sawlog Exports from Southeast Alaska



1989 Tongass Issues Revisited

Public issues

Public issues about management of the Tongass haven't changed much since the Land Management Plan was implemented in 1979. Of particular concern is the amount and location of land allocated to emphasize different resources.

- What areas on the Tongass National Forest should be managed to emphasize natural scenic quality?
- What areas should be managed to emphasize recreation opportunities?
- What methods should be used to protect resident and anadromous fish habitat?
- What amount of old growth and undeveloped habitat should be managed for the protection of wildlife?
- What should the Forest Service do to continue providing subsistence opportunities?
- What areas of the Tongass should be managed to emphasize timber harvesting?
- What road system should be developed on the Tongass National Forest?

- What access should be allowed for mineral exploration and development?
- What areas and what amount of roadless lands should be recommended for Wilderness designation and what kinds of uses should be permitted?
- What should the Forest Service do to provide for the local lifestyles of Southeast Alaska communities?

Current economic environment

The economic and political environment has changed dramatically since 1979.

During the 1980's, tourism became an important industry in Southeast Alaska. Cruiseships made regular stops at Southeast



ports in record numbers. Between 1980 and 1986, cruiseship passenger numbers increased nearly 90 percent and total visitors grew by nearly 100,000.

Although the commercial fisheries industry in Southeast Alaska continues to fluctuate, it remains one of the top producers of jobs and revenue for Southeast Alaskans. In 1988, fisheries provided just

under 3,400 jobs with earnings of nearly \$73 million.

The value of forest products exported from Alaska increased from just under \$205 million in 1985 to more than \$475 million in 1988. Correspondingly, employment in the forest products industry in Southeast Alaska has rebounded from a low of 1,950 jobs in 1985 to almost 3,400 jobs in 1988.

The demand for minerals, like timber, depends on world markets. Current world metal prices make it economically viable to develop 13 mineral deposits on the Tongass having a net present value of 25.6 billion. The largest silver mine in North America opened in Southeast Alaska in 1989.



Current political environment

Nationwide, a resurgence in environmental awareness and concern reminiscent of the late 1960's is occurring. Issues such as global warming and acid rain have commanded the attention of Congress. President Bush has declared he intends to be known as, "the environmental President."

Within this backdrop of heightened national interest in environmental issues, legislation is currently pending in Congress which would change management of the Tongass. Some points of agreement have been reached, however, there is disagreement over issues such as cancellation of the long-term timber sale contracts and legislated wilderness areas.

Issues addressed

The Tongass Land Management Plan is being revised to address public issues within this current economic and political environment.

When completed, the Revised Forest Plan will guide future activities on the Tongass.

The decisions to be made are difficult because a positive increase in the development of one industry or lifestyle may negatively affect another. Minor changes in management of the Tongass can cause major changes in community lifestyles.

Designing the Future of the Tongass...

Discovering the limits of what's possible

Can all of us have everything we want from the Tongass of tomorrow?

Many Southeast Alaskans want to keep the wildness that makes their part of the world unique. At the same time, they want to continue maintaining their economic livelihood. This conflict and the competition for natural resources is quite keen and difficult to resolve.

Resources cannot be managed independently although each resource can be managed in a variety of ways. Understanding these complex interactions is key to considering future options.

Pages 32 through 49 explore questions such as, How much land on the Tongass is roadless? How much old growth exists on the Forest? How much habitat is available on the Tongass for fish and wildlife? What is the demand for recreation and tourism? How much timber is available for harvesting? What kinds of minerals can be found on the Tongass?





Measuring opportunities

Social, economic and resource opportunities and their interrelationships are being measured using computer models. These interrelationships are called benchmarks.

Benchmarks show how much of each resource the Tongass can produce and what effect its production has on other resources.

For example, benchmarks will show how much recreation and tourism is likely if the Forest was managed primarily for this purpose.

În all, 24 benchmarks are

being developed.

Presented on pages 50 to 59 are the resource potentials, or benchmarks, for wilderness, fish, wildlife, recreation, and timber. These benchmarks will form the foundation for reconsidering how to manage the Tongass National Forest for the next 10 to 15 years.

Wilderness: an enduring resource

Congress added 43 areas containing 56.4 million acres to the National Wilderness Preservation System when it passed the Alaska National Interest Conservation Act (ANILCA) in 1980 (see pages 24 and 25).

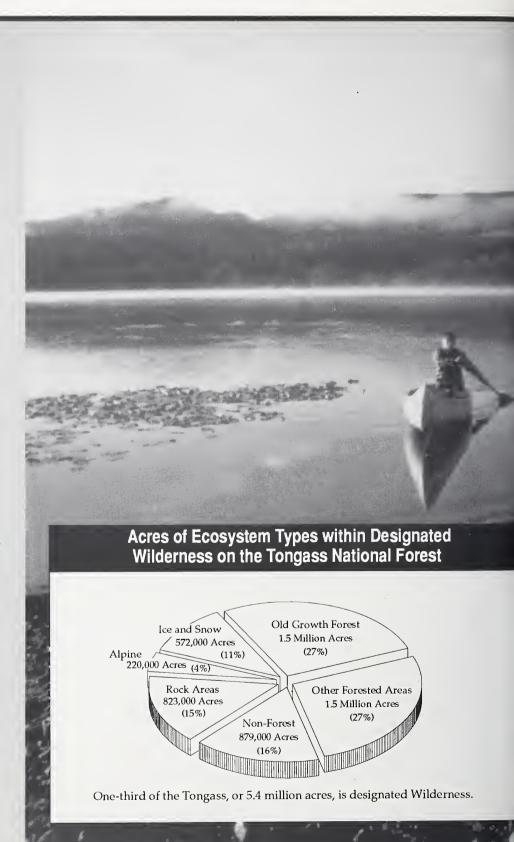
The passage of ANILCA resulted in creation of 14 Wilderness areas totalling 5.4 million acres, or 32 percent of the Tongass National Forest. Two of these Wildernesses are also designated as National Monuments.

Typical wildland ecosystems of Southeast Alaska are found within Tongass Wilderness areas including 1.5 million acres of old growth forest.

The Wilderness Act of 1964 requires Wilderness to be maintained in a pristine condition with no developments, timber harvesting, new mining claims or use of motor vehicles or mecha-

nized equipment.

In recognition of the unique situation in Alaska, ANILCA allows some specific activities that do not conform to the 1964 Wilderness Act. These include: the use of motorboats, airplanes and snowmobiles for traditional activities: fisheries enhancement facilities; subsistence use; temporary facilities for hunting, fishing and trapping; and, existing public use cabins.



...the future of designated Wilderness...



Management challenges

Although use is still low in remote Wilderness areas, overuse of some popular areas is occurring. The challenge is to determine what level of use can be allowed without threatening the natural appearing landscape and quality of the wilderness experience.

Public concern has been expressed over proposals for commercial floating lodges, mariculture operations, float houses, and Naval test facilities in bays and fiords adjacent to Wilderness shorelines. The challenge is to determine what activities can be permitted without reducing opportunities for solitude and degrading the natural wild setting.

Expansion of some activities allowed by ANILCA may threaten wilderness values and result in user conflicts. The challenge is to achieve a balance between preservation of wilderness values and the specific activities provided by ANILCA.

Roadless areas

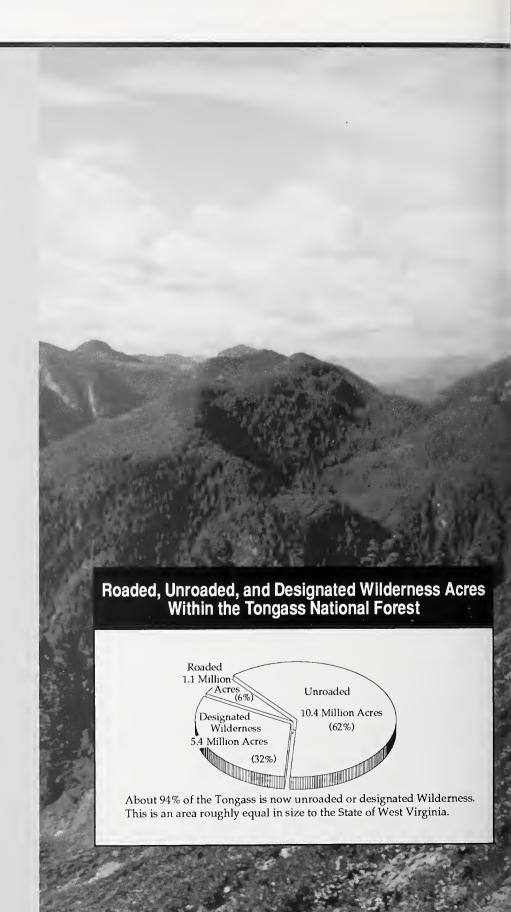
Southeast Alaska residents and visitors find themselves virtually surrounded by wild and roadless land.

Because of the Tongass' large size, limited development and unique marine character, routine travel and ordinary outdoor recreation activities often require greater skill and self-reliance than typically required of backcountry visitors. This wildness, and the associated lifestyles and recreation opportunities, is prized by visitors and residents alike.

Since 1950, about 360,000 acres of roadless lands have been entered for timber harvesting.

In 1980, ANILCA designated 5.4 million acres of roadless land on the Tongass to Wilderness.

Today, there are 10.4 million acres of roadless land remaining on the Tongass that are not designated Wilderness.



...the future of roadless areas...



Management challenges

Across the Nation, demand for undeveloped areas is increasing in response to growing concern over global issues, like clean air and water, the "greenhouse" effect, and deforestation in tropical and temperate rain forests. The demand for recreation in undeveloped areas is also growing.

Only a few National Forests, including the Tongass, still have the opportunity to preserve large roadless tracts in their present form. On the Tongass, several of the 108 roadless areas exceed one million acres; the largest is 2.3

million acres.

These roadless areas also contain most of the important timber, mineral and other resources of economic value in Southeast Alaska. As a result, managers of the Tongass must address two key questions:

How would the designation of additional Wilderness affect growth and development opportunities for timber and mineral resources important to Alaska's

economy?

What amount of the roadless areas on the Tongass should be maintained as wildland areas for their ecologic, wildlife and primitive recreation values?

Old growth on the Tongass

The Tongass' supply of old growth is important for wildlife, biological diversity, natural ecosystems, recreation, scenic and water quality, and fish habi-

Old growth means different things to different people depending on its type, size, and location. For this reason, many different definitions of old growth have been developed.

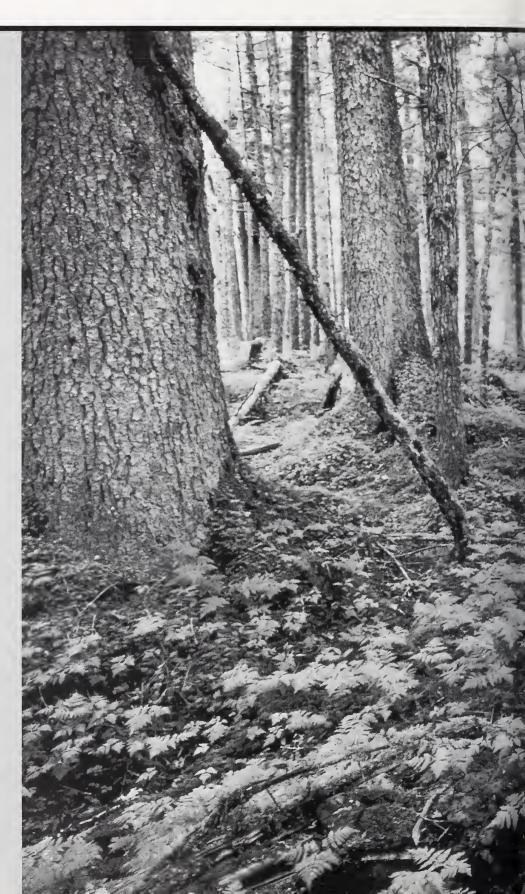
Spruce, hemlock, and cedar old growth on the Tongass is also important to the economy of Southeast Alaska as a commercial timber product. The large tree size, pulp characteristics, construction properties and wood quality make old growth the most valuable component of the commercial timber industry.

Fifty-nine percent of the Tongass National Forest is forested land. Eighty-seven percent of the forested land, or 8.7 million acres, is in an old growth condi-

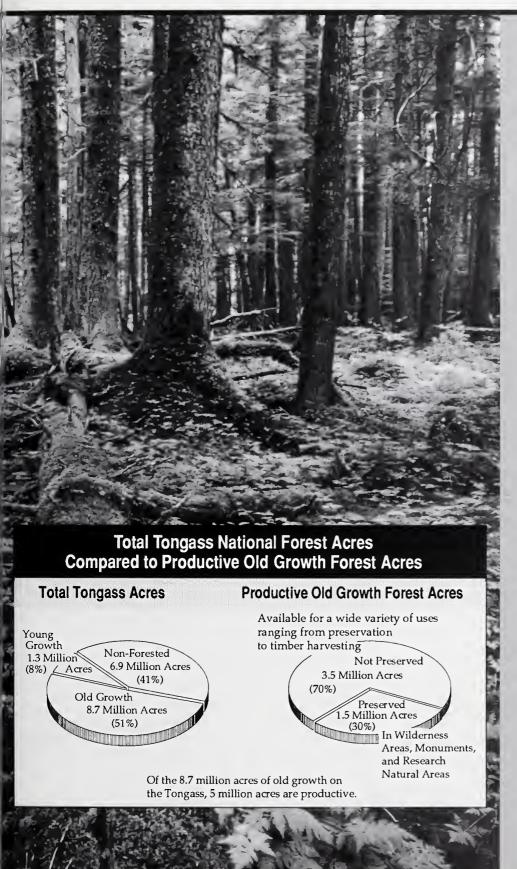
tion.

Not all old growth on the Tongass is productive forest land. About 3.6 million acres have no commercial value and will not be managed for timber production.

Of the 5.1 million acres of old growth on productive forest land, about 1.5 million acres, or 29 percent, are currently preserved in designated Wilderness areas, National Monuments, and research natural areas.



...the future of old growth ...



Management challenges

Large old growth trees usually span several human lifetimes and are not quickly or

easily replaced.

The challenge is to determine how much old growth is needed to meet the variety of existing demands, what types of old growth are needed, and where it should be retained.

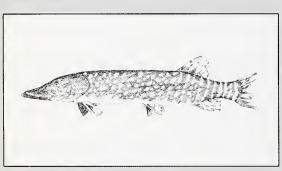
The U.S. Fish and Wildlife Service identifies threatened and endangered species. There are none on the Tongass. The Forest Service identifies sensitive species on National Forests because of concern about their habitat needs and population viability. The four species displayed below are being evaluated for sensitivity to management activities on the Tongass.



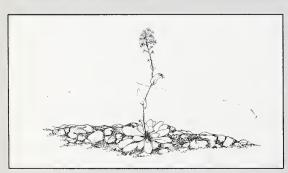
TRUMPETER SWAN — exists on the Tongass National Forest at Yakutat (19 pairs), and outside National Forest lands in the Chilkat Valley (13 pairs). Surveys by the U.S. Fish & Wildlife Service indicate that the Yakutat population has been stable, while the population in the Chilkat Valley has increased from one pair in 1975 to the current 13 pairs. Swans winter in ice--free areas throughout Southeast Alaska. Information on wintering habitats and populations is very limited.



PEALE'S PEREGRINE FALCON — nests have been located in Southeast Alaska. Thirty-two of the 36 nests are on the Tongass. The nests are closely associated with large seabird colonies located on the outer coasts or nearby islands; seabirds are thought to be major prey of the falcon. The nest sites are on cliffs at heights ranging from 20 to 275 meters and all but one face the open ocean. Nest surveys are difficult because of their location, but biologists believe there are more than those seen.



NORTHERN PIKE — are found in five lakes on the Tongass, about 23 miles east of Yakutat. The lakes are shallow, with peat-filled margins and high concentrations of humic acid. They are the only naturally occurring pike in Southeast Alaska and are probably remnant populations that survived only because the most recent glacial advance missed the pike lakes area. Little information is available on the life history and population dynamics of these isolated populations.



THLASPI ARTICUM — is a plant in the mustard family that flowers from white to lavender. It is known to grow only upon well—drained sites on alpine slopes, dry ridges and especially in the sands and gravels of low river terraces and on active floodplains. Although this specie is now known from a number of widely spaced locations in Alaska, most of the reports are of one or a very few individual plants. In Southeast Alaska, the only known location is the Lynn Canal area.

...the future of threatened, endangered, and sensitive species...



Threatened, endangered and sensitive species

No federally listed threatened or endangered species exists on the Tongass. However, eight species of endangered whales frequent Southeast Alaska's coastal waters. Also, two subspecies of peregrine falcon, one endangered and one threatened, migrate through the area.

An endangered species is one which is in danger of extinction, and a threatened species is one likely to become endangered within the foreseeable future.

A sensitive species is one for which populations are a concern on a given National Forest.

Some species on the Tongass are being evaluated for their sensitivity to management activities. These include osprey, Peale's peregrine falcon, trumpeter swan, northern pike, two island runs of King Salmon, and a plant known only by its scientific name, *Thlaspi articum*.

Management challenges

The challenge is to provide adequate habitat for viable populations of all species on the Tongass National Forest.

Fish

The fish resource on the Tongass provides for a primary economic and social sector of Southeast Alaska. Residents and others harvest fish for commercial and sport purposes, while local rural residents are provided with subsistence opportunities.

In 1988, the fisheries were among the top producers of jobs and revenue, providing about 3400 jobs with earnings of nearly \$74 million.

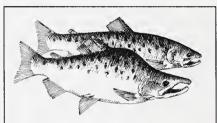
The Tongass includes about 300,000 acres of lakes and provides about 24,000 miles of streams. These streams are used by salmon and other important species of fish.

Indicators and improvements

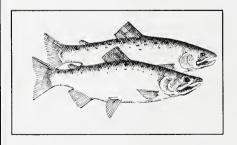
Thirty-seven species of fish inhabit waters on the Tongass. Eight of them, king, coho, sockeye, pink and chum salmon; Dolly Varden char; steelhead and cutthroat trout, have significant sport and commercial value. Of these eight, three have been selected to indicate the effects of management activities on aquatic habitats: pink salmon, coho salmon, and the Dolly Varden char.

Since 1979, more than 150 habitat improvement projects have been completed, including the construction of fishways, spawning channels, and the placement of habitat structures. Numerous potential projects have been identified for future development.

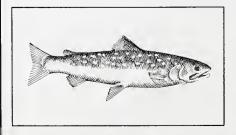




PINK SALMON — spawn in freshwater streams in early fall. Young emerge from gravels in April and immediately move to saltwater. Instream survival depends on gravel conditions. Pinks average about 4.5 pounds and are usually caught with purse seines, gillnets and hook and line.



COHO SALMON — spawn in freshwater streams in the fall. Young emerge from gravels around April. After one to three years, coho move to salt water. Instream survival depends on maintenance of suitable stream habitat, especially during winter. Adult coho average about 9 pounds and are usually caught by troll and gillnet fishermen.



DOLLY VARDEN CHAR—spawn in freshwater streams in early fall and often spend their entire lives in freshwater streams and lakes although in some places they return to saltwater in the spring. Survival depends on maintenance of suitable stream and lake rearing areas, especially during winter. Dolly Varden vary greatly in size from less than 1 pound to over 30 and are caught by hook and line.

...the future of fish...



Important riparian ecosystems

Transition areas between the aquatic habitat of streams or lakes and upland forests is called the riparian ecosystem. The riparian ecosystem provides stability and protection of streams and lakes used as spawning and rearing areas for most of Alaska's salmon and other fish.

Because of its rich soils, the riparian ecosystem usually produces high quality timber. Changes in the riparian and aquatic ecosystems can alter the ability of streams to produce fish.

Management challenges

The challenge is to ensure long term productivity of riparian ecosystems for commercial, sport and subsistence fish resources and for other uses including timber harvesting.

Thirteen species of wildlife are used to represent the effects of management activities on Tongass National Forest habitat. The four species displayed below represent a cross-section of the wildlife habitat needs of all thirteen management indicator species.



BROWN BEAR — are found in higher densities in Southeast Alaska than anywhere else in the world. Maintaining habitats which provide an abundance of forage, and reducing chances of human-bear encounters are primary management concerns. There are 8.4 million acres of brown bear habitat on the Tongass; 44 percent of this habitat is in Wilderness. About 5.6 million acres, or 66 percent, are forested and about 2.8 million acres, or 34 percent are non-forested. About 2 percent of the forested acres have been harvested and 490 miles of road have been built; 265 miles have been closed after use. From 1980 through 1987, 900 brown bear have been taken by hunters, and 95 brown bear have been killed from other human/bear conflicts.



SITKA BLACK-TAILED DEER — provide the most big game hunting opportunities; in 1987, an estimated 9,500 hunters spent 68,000 hunter days and harvested about 19,000 deer. Winter range is considered the limiting and critical habitat with the most important winter ranges located below 800 feet elevation. There are 4.9 million acres of winter range on the Forest below 800 feet elevation; 26 percent of these acres are within Wilderness. Timber harvest has occurred on about 14 percent of the productive forested winter range outside of Wilderness.



AMERICAN BALD EAGLE — nest in higher densities in Southeast Alaska than anywhere else in the world. Over 7,000 nest sites have been located on the Tongass National Forest with more than 95 percent of the nests located along the coast. The remaining nests are found along rivers and lakes. The Forest Service and U.S. Fish and Wildlife Service maintain an interagency agreement for the management and protection of bald eagles and their habitat. Nest sites are protected with a minimum 330 ft. radius of undisturbed vegetative buffer. Population estimates range from about 10,000 adults in the early 1980's to between 12,000 and 15,000 adults currently.



RED SQUIRREL — existed only on Southeast Alaska's mainland before 1930. In 1930, an introduction program began to place red squirrels on islands as a prey species for marten that were also introduced. Red squirrels use all conifer stands of seed producing age. Of the total red squirrel habitat on the Forest, about 247,000 acres (4 percent) are incapable of producing seeds while 6.4 million acres (96 percent) are in seed producing age categories.

...the future of wildlife...



Wildlife habitat on the Tongass

Nearly 300 species of mammals, birds, amphibians and reptiles make the Tongass National Forest their home.

Many species, including brown bears and bald eagles, which are threatened or endangered elsewhere in the United States, are abundant on the Tongass.

The Tongass is also somewhat unique with the presence of 18 species of marine mammals that live in waters surrounding the Forest. Three species of amphibians and reptiles and 45 species of birds occasionally visit the area.

Forested lands that are productive for many wildlife species and for timber management comprise 5.6 million acres, or 33 percent of the Tongass National Forest. Since 1910, timber harvest has occurred on about 500,000 acres, or 9 percent of these productive areas.

Most timber harvest is occurring in high volume stands that are also important for many wildlife species.

Management challenges

The challenge is determining how to manage forested habitats for competing wildlife and timber uses.

Recreation and Tourism

In Southeast Alaska, recreation opportunities and the tourism industry interact differently than elsewhere.

Tourists arrive in Southeast Alaska mainly by cruise ships or by air rather than by automobile. As a result, they are more dependent on tour packages and guide services, and are generally less able to engage in "do it yourself" trips.

The marine-island character of the Forest, great scale of the landscape, isolated communities, and lack of conventional transportation result in a pattern of relatively short "day visits."

Activities are strongly associated with wildlife resources and the area's superlative visual character.

Two-thirds of Southeast Alaska's 350,000 annual visitors come for the scenery; only 11 percent actually stay overnight in the National Forest.

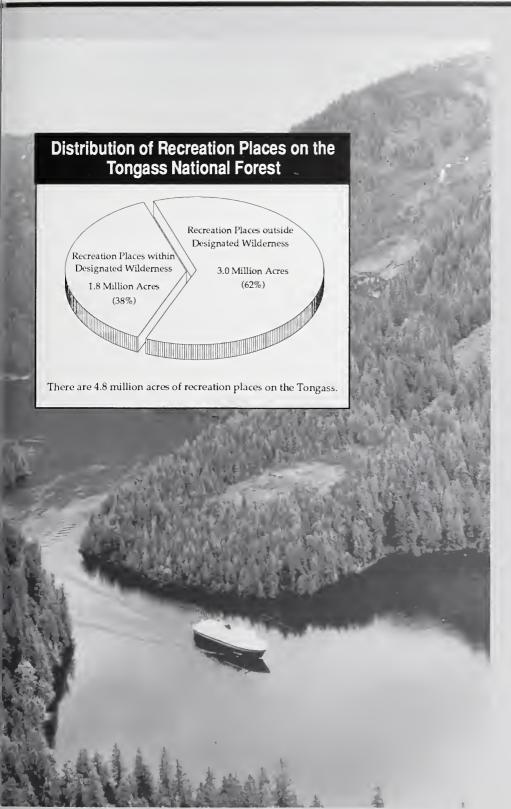
Increasing cruise ship arrivals in recent years, and associated "flightseeing" while in ports, now brings a large number of visitors into close contact with the scenery of the Tongass. These visitors to Southeast Alaska generated most of the \$74 million spent by tourists in 1988.

Many residents also spend a great deal of time recreating on the National Forest. Local residents make up 2.2 million of the 2.8 million visitor days that occur annually on the Tongass.





...the future of recreation and tourism...



Most of the recreation use within the Forest occurs in favorite recreation places along the extensive shorelines, lakes and rivers. On the Tongass, 1,300 recreation places, comprising about 4.8 million acres, have been identified. Many form the primary recreation destinations of community residents, although some have become popular with tourists as well.

Because recreation places tend to occur in areas associated with valleys, streams and beach fringes, they also tend to have high values for other resources including wildlife and timber.

Management challenges

Tourism is a growing industry, responsible for increasing economic diversification. It is highly dependent on the diversity of scenery and wildlife provided by the National Forest.

The challenge is determining how to maintain growth opportunities for tourism and economic diversification, and to ensure high quality recreation places, given competing timber values.

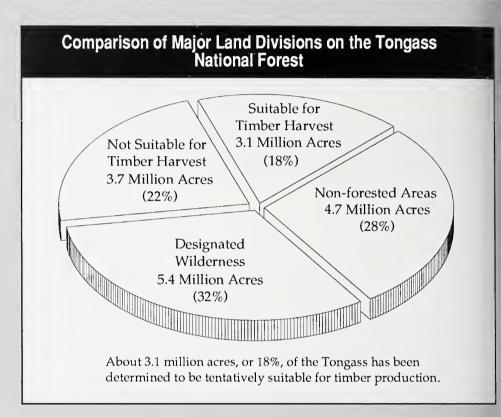
How much timber could be harvested from the Tongass?

Of the 16.9 million acres that make up the Tongass National Forest, about 3 million acres, roughly 18 percent, are tentatively suitable for timber harvesting on a sustained yield basis.

Tentatively suitable lands are forested or capable of growing commercial timber. Areas withdrawn from the tentatively suitable land base are those where no industrial tree species are produced, where reforestation is difficult, or where landslides are likely to occur. Wilderness Areas, National Monuments, Research Natural Areas, and experimental forests are also withdrawn.

How much timber should be harvested from the Tongass?

In the 1950's, emphasis was on stabilizing the economy in Southeast Alaska. Long-term timber sale contracts were signed to guarantee the availability of timber to investors.



Commercial Trees Growing in the Tongass National Forest

component is distributed widely across the Tongass.

SITKA SPRUCE — comprises about 4 percent of the lands capable of producing industrial—grade wood. Found throughout the Tongass from sea level to timberline, growing best on well–drained soils of lower mountain slopes and valley bottoms.

WESTERN HEMLOCK — is the major commercial timber component of the Tongass, making up about 51 percent of its industrial–grade woodlands. Grows densest and best in valley bottoms and on lower mountain slopes.

WESTERN HEMLOCK/SITKA SPRUCE MIXED CONIFERS — comprise about 43 percent of the Tongass' industrial-grade timberlands. This

ALASKA YELLOW-CEDAR and WESTERN REDCEDAR — are the two most important remaining commercial components in most timber stands of the Tongass. Concentrated presence of this tree often indicates that the soils are poorly drained. About 1 percent of the tentatively suitable land outside Wilderness is comprised of this vegetative type.



...the future of timber...



Roads were built, mills were established, and timber was harvested. Demand for timber gradually increased, and timber harvesting levels peaked in the late 1970's.

During the 1970's, more people began expressing an interest toward greater conservation and protection of the natural environment.

In the early 1980's, the market changed. Demand for National Forest timber, and timber prices, plummeted. There was a corresponding decline in the amount of timber that was harvested on the Tongass. Southeast Alaska's economy suffered.

Today, timber demand is at an all-time high and is projected to remain high.

Management challenges

Considering the shift in public attitudes and the economic needs of Southeast Alaska communities, the challenge is to determine what areas of the Tongass National Forest should be managed to emphasize timber production.

Mineral Resources on the Tongass?

The Tongass National Forest contains a wide variety of mineral resources ranging from precious metals, like gold and silver, to minerals used by industry like molybdenum, uranium,

and copper.

These minerals are an important part of our daily life. Without them, we would not have modern computers, automobiles, airplanes, or fishing and mining equipment. The average color television set contains 35 different minerals, from copper to yttrium.

The Tongass also contains critical and strategic minerals. These minerals are important because they are not found or produced in the United States in sufficient quantities to meet National emergencies.

Mineral exploration and mining have been a part of life in Southeast Alaska for over 120 years. Today, the mining industry is exploring new areas for potential mineral deposits and is revisiting historic mining areas using modern exploration techniques.

There are 13 identified mineral deposits on the Tongass National Forest that appear economically viable for development under today's market conditions. The net present value of these 13 deposits is estimated at 25.6 billion dollars.

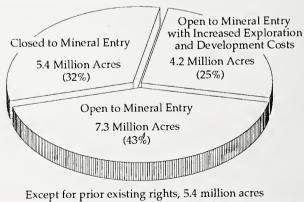
Quantity of Minerals Deposits on the Tongass National Forest and their Gross Metal Value

Mineral	In-Place Resources	Dollars (1988)			
Barite	266,000 tons	\$10,391,000			
Cobalt*	9,680,000 lbs	64,856,000			
Copper*	452,628,000 lbs	416,418,000			
Gold	4,954,000 troy oz	2,261,369,000			
Iron	193,045,000 tons	12,711,989,000			
Lead*	484,678,000 lbs	184,178,000			
Molybdenum	4,502,646,000 lbs	25,755,135,000			
Nickel*	151,244,000 lbs	431,044,000			
Palladium*	122 oz	17,000			
Platinum*	1,350 oz	680,000			
Silver	105,840,800 oz	1,225,636,000			
Tungsten*	425,800 lbs	667,000			
Uranium	499,300 lbs	8,313,000			
Vanadium*	7,500,000 lbs	30,750,000			
Zinc*	1,407,428,000 lbs	661,406,000			
TOTAL		\$43,762,349,000			

The Tongass National Forest has 148 identified mineral deposits that cover about 724,500 acres or about 4 percent of the Tongass.

*Critical or strategic minerals identified by the U.S. Bureau of Mines.

Lands Accessible to Mineral Exploration and Development on the Tongass National Forest



Except for prior existing rights, 5.4 million acres are closed or withdrawn from mineral entry.

...and the future of minerals...



Demand for minerals in Southeast Alaska

Demand for minerals on the Tongass can be inferred from the amount of money spent by the mining industry on mineral

exploration.

Between 1981 and 1988 the mining industry spent 59 million dollars to explore for minerals in Southeast Alaska, an average of 74 million dollars per year. In 1988 alone, 20.6 million dollars were spent on mineral exploration creating about 140 jobs.

Management challenges

The mining industry is dependent on access to Federal lands for discovery of new mineral deposits. Withdrawn lands, such as Wildernesses and National Monuments are not accessible to mineral entry.

Limited mineral entry reduces economical opportunities for mineral exploration and develop-

ment.

The challenge for the future will be to resolve the conflict over society's increasing demand for non-renewable mineral resources with the increasing demand for protection of the environment.

Opportunities for Change ...

Benchmarks

Benchmarks show how much of each resource the Tongass can produce and what effects this production has on other resources (see page 31).

The benchmarks discussed in this section include: the current management situation; the most economical way to manage Tongass resources; and, maximum production potentials for Wilderness, fish, wildlife, recreation and tourism, and timber. Benchmarks assume full funding is available for projects.

Maximum production potentials from benchmarks help define the limits within which draft alternatives can be developed.

Policy requirements

All benchmarks discussed in this section are designed to ensure resource protection, as required by the National Forest Management Act. Some of the requirements and policies are:

Long term sustained yield ensures established harvest levels can be sustained forever.

Non-declining yield - ensures timber production planned for any one decade does not exceed that of any succeeding decade.





Dispersion - ensures clearcut openings are not adjacent to one another for about ten years.

Riparian areas - ensures no serious and adverse effects on water quality or fish habitat within riparian areas.

Viable wildlife populations ensures adequate habitats are maintained to sustain fish and wildlife populations over time.

Site productivity - ensures no significant impairment of soil and water productivity.

Present net value

Present net value (PNV) is a yardstick used to measure the economic value resulting from management of Tongass National Forest resources. PNV is the difference between benefits and costs associated with resource management.

For forest planning, PNV compares values associated with timber, hunting, fishing, minerals and other uses, with their associated costs. As outputs and costs change under different benchmarks or alternatives, PNV will change also.

For each resource benchmark, the maximum potential for that resource is determined first. PNV is then used to determine the remaining compatible uses and activities.

...from the current situation...

Preliminary benchmark findings

Two benchmarks provide a basis for comparing and analyzing the others. These are the current plan potential and maximum PNV benchmarks.

Current plan potential

This benchmark displays the outputs and uses that would occur for the next 150 years if the existing land allocations, management direction, policies and practices were continued. It serves as the baseline or standard against which the results of any proposed change in current management can be measured. This and all other benchmarks have no budgetary constraints. Some key outputs from this benchmark are:

- An allowable sale quantity of 450 MMBF/year for the first 10 years, with a long-term sustained yield of about 1,020 MMBF.
- 15.7 million acres of roadless land, including designated Wilderness, remaining after 10 years.
- A capability for 130 million pounds/year of harvestable fish.
- 7.5 million acres of old growth remaining after 50 years.
- A total recreation capacity of 4,200 MRVD after 10 years.
- A PNV of \$2.70 billion excluding minerals.

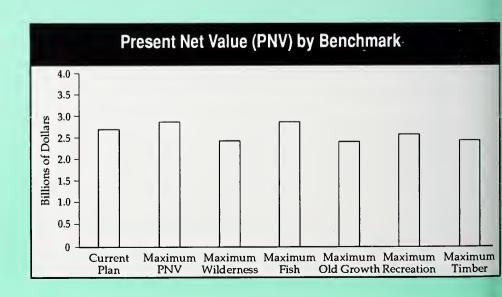
Definition of Terms

ASQ - Allowable sale quantity is the maximum amount of timber that could be offered for sale during the 10-year planning period. ASQ is normally expressed as an average annual amount.

LTSY - Long-term sustained yield is the maximum amount of timber that could be harvested annually. LTSY is much higher than short-term ASQ because managed second growth timber will have two to three times the volume of existing old growth.

MMBF - Million board feet is a standard measure of timber volume. There is enough wood in one MMBF to build about 90 houses.

MRVD - Thousand recreation visitor days is equivalent to onethousand people recreating in the National Forest for a 12-hour period.





Maximum present net value

This benchmark displays the most economical way to manage Tongass National Forest resources while adhering to the legal requirements defined on pages 50 and 51. Some important outputs from this benchmark are:

- An allowable sale quantity of 580 MMBF/year for the first 10 years, with a long-term sustained yield of about 1,510 MMBF.
- 15.5 million acres of roadless land, including designated Wilderness, remaining after 10 years.
- A capability for 130 million pounds/year of harvestable fish.
- 7.5 million acres of old growth remaining after 50 years.
- A total recreation capacity of 4,200 MRVD after 10 years.
- A PNV of \$2.88 billion excluding minerals.

...resource potential for Wilderness...

Maximum wilderness

This benchmark allocates all roadless areas to wilderness. Some important outputs from this benchmark include:

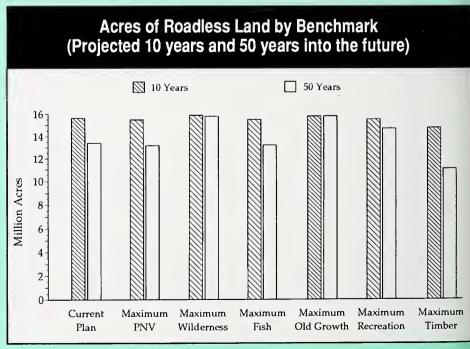
- An allowable sale quantity of 150 MMBF/year for the first 10 years, with a long-term sustained yield of about 360 MMBF.
- 15.9 million acres of roadless land, including designated Wilderness, is available for Wilderness designation.
- A capability for 130 million pounds/year of harvestable fish.
- 8.4 million acres of old growth remaining after 50 years.
- A total recreation capacity of 4,300 MRVD after 10 years.
- A PNV of \$2.44 billion excluding minerals.

Maximum fish

This benchmark displays the maximum capability of the Forest to provide fish for commercial, sport, and subsistence purposes. Some important outputs from this benchmarks are:

- An allowable sale quantity of 580 MMBF/year for the first 10 years with a long-term sustained yield of about 1,510 MMBF.
- 15.5 million acres of roadless land, including designated Wilderness, remaining after 10 years.

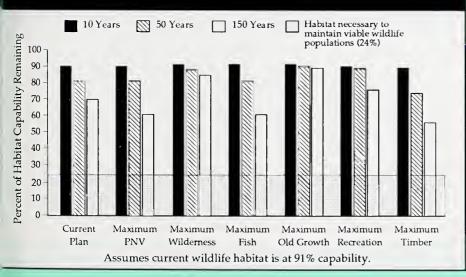




...fish and old growth associated wildlife...



Wildlife Habitat Capability by Benchmark (Projected 10, 50, and 150 years into the future)



- A capability for 130 million pounds/year of harvestable fish.
- 7.5 million acres of old growth remaining after 50 years.
- A total recreation capacity of 4,200 MRVD for the first decade.
- A PNV of \$2.88 billion excluding minerals.

Maximum old growth associated wildlife

This benchmark defines the maximum protection of high quality old growth habitat for wildlife and compatible uses the Forest can provide.

- An allowable sale quantity of 40 MMBF/year for the first 10 years, with a long-term sustained yield of about 450 MMBF.
- 15.8 million acres of roadless land, including designated Wilderness, remaining after 10 years.
- A capability for 130 million pounds/year of harvestable fish.
- 8.6 million acres of old growth remaining after 50 years.
- A total recreation capacity of 4,300 MRVD after 10 years.
- A PNV of \$2.40 billion excluding minerals.

...resource potential for recreation...

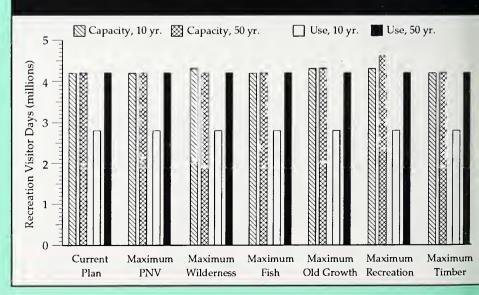
Maximum recreation

This benchmark defines the maximum capability of the Forest to provide high quality recreation experiences by retaining the existing capacity of recreation places. These places provide opportunities for a wide range of recreation activities, including hunting, fishing, camping, and scenic viewing that would occur in both developed and undeveloped settings. Some important outputs from this benchmark include:

- An allowable sale quantity of 370 MMBF/year for the first 10 years, with a long-term sustained yield of about 600 MMBF.
- 15.5 million acres of roadless land, including designated Wilderness, remaining after 10 years.
- A capability for 130 million pounds/year of harvestable fish.
- 8.1 million acres of old growth remaining after 50 years.
- A total recreation capacity of 4,300 MRVD after 10 years.
- A PNV of \$2.58 billion excluding minerals.



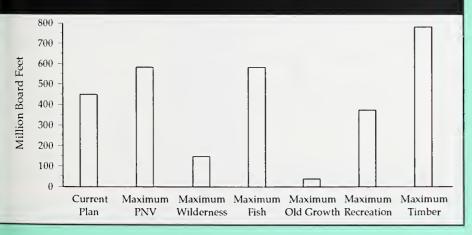
Recreation Capacity and Use by Benchmark (Projected 10 years and 50 years into the future)



...and timber...



Average Annual Allowable Sale Quantity by Benchmark (Outside of Designated Wilderness)



Maximum timber

This benchmark estimates the highest amount of timber that can be harvested from the tentatively suitable forest land of the Tongass on a sustained-yield basis. The focus of this benchmark is biological potential, not economics. Some important outputs from this benchmark are:

- An allowable sale quantity of 780 MMBF/year for the first 10 years, with a long-term sustained yield of about 1,950 MMBF.
- •14.8 million acres of roadless land, including designated Wilderness, remaining after 10 years.
- A capability for 130 million pounds/year of harvestable fish.
- 7.1 million acres of old growth remaining after 50 years.
- A total recreation capacity of 4,200 MRVD after 10 years.
- A PNV of \$2.42 billion excluding minerals.

...employment...

Current employment

Commercial fishing, recreation and tourism, and wood products are the core of Southeast Alaska's economy. With exception of government jobs, most employment is directly or indirectly related to these three industries.

In 1988, almost 45 percent of the non-government employees in Southeast Alaska harvested or processed timber or fish; or supported tourism or resident recretion. Directly or indirectly, roughly 5,700 wage-earners depend on the harvest or production of wood products. About 4,700 workers, directly or indirectly, made their living from fish harvesting or processing. Another 4,500 jobs depend, directly or indirectly, on tourism and resident recreation.

Around 60 percent of the forest products employment, 53 percent of the fisheries employment, and an undetermined proportion of the recreation employment, depends on the Tongass National Forest.

How changes in forest management affect employment

Changes in management of the Tongass can change the mix of products available from the Forest, with a resulting change in the economy of Southeast Alaska. For example, with investments to maximize fish production and recreation capacity, employment in fishing and recreation and tourism industries is projected to increase under all benchmarks. Without investments, employment in these industries would not increase

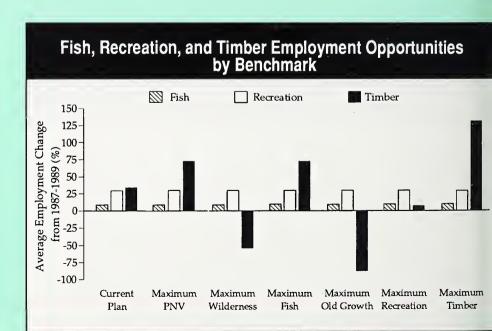
Maximizing old growth dependent wildlife or Wilderness would result in a reduction of the allowable sale quantity and could increase the cost of mineral exploration and development. This, in turn, could result in a decline in timber- and mineral-related employment. Benchmarks with higher allowable sale quantities would increase employment opportunities in timber-related industries.

Under the Maximum Timber benchmark, employment would increase in all sectors of the economy because of investments in timber production and fish and recreation improvements.

Preliminary findings

Several important findings become apparent when benchmarks results are compared. Much of the forest remains in a roadless condition for the foreseeable future under all benchmark scenarios. Some benchmarks show that the Tongass has potential to increase long-term sustained timber yields.

The Fish and Recreation benchmarks show only moderate impacts on other resource potentials, indicating that these two resources are generally compatible with other uses.



...preliminary benchmark findings...

The Timber, Wildlife and Wilderness benchmarks show that these resources are very competitive. When any one of these resources are emphasized, other resources show significant reductions. Wilderness, Old Growth, and Recreation benchmarks increase mineral exploration and development costs.

Because of abundant resource potential, there are several viable options to managing the Tongass National Forest for many lecades. Benchmark results will be used to develop these op-

tions, or alternatives, to manage the Tongass.

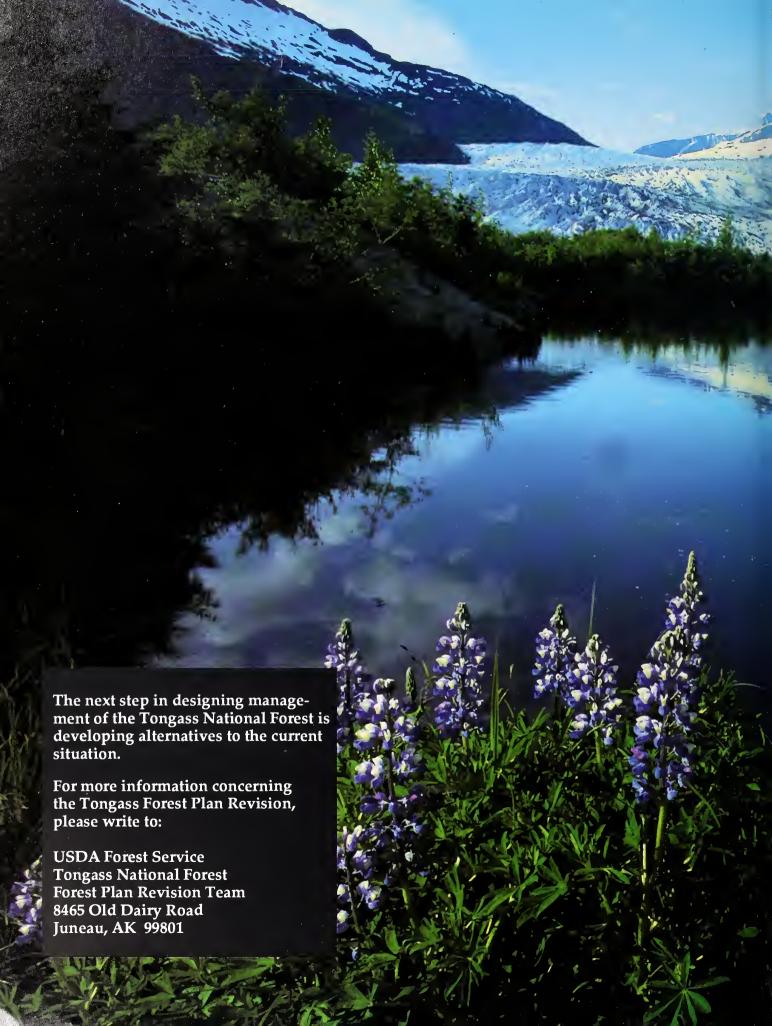
Benchmarks, themselves, are not alternatives because they assume no budgetary constraints. Benchmarks assume full funding is available to construct all projects needed to realize full resource potentials on the Tongass.

Next step

Considering alternatives to the current situation is the next step in designing management of the Tongass National Forest.

Alternatives will be presented for public comment in a Draft Environmental Impact Statement which will describe effects of changes proposed in the Tongass Forest Plan.

Comparison of Benchmark Findings with the Existing Condition									
Unit of Measure	1/	1/ Benchmarks							
	1989 Existing Condition	Current Plan Potential	Maximum PNV	Maximum Wilderness	Maximum Fish	Maximum Old Growth	Maximum Recreation	Maximum Timber	
Allowable Sale Quantity (MMBF)	377*	450	580	150	580	40	370	780	
Long Term Sustained Yield (MMBF)	**	1,024	1,510	360	1,510	450	600	1,950	
Roadless Land Remaining After 10/50 Years including Designated Wilderness (Million Acres)	15.8	15.7/13.4	15.5/13.2	15.9/15.8	15.5/13.2	15.8/15.8	15.5/14.7	14.8/11.1	
Fish Capability After 10/50 Years (Million Pounds)	118	130/130	130/130	130/130	130/130	130/130	130/130	130/130	
Old Growth Remaining After 10/50 Years (Million Acres)	8.7	8.5/7.5	8.5/7.5	8.6/8.4	8.5/7.5	8.7/8.6	8.6/8.1	8.4/7.1	
Wildlife Habitat Capability After 10/50/150 Years (Percent)	91	90/81/70	90/81/61	91/88/85	90/81/61	91/90/89	90/88/76	89/74/56	
Recreation Capacity After 10/50 Years (MRVD)	4,200	4,200/4,200	4,200/4,200	4,300/4,200	4,200/4,200	4,300/4,300	4,300/4,600	4,200/4,200	
Present Net Value (Billions of \$)	**	2.70	2.88	2.44	2.88	2.40	2.58	2.42	
Average Annual Employment for First 10 Years (Jobs)	11,900	14,000	15,100	11,500	15,100	10,500	13,500	16,800	
Average Annual Job Earnings for First 10 Years (Millions of \$)	279	348	381	271	381	243	328	432	
* Harvested ** Not Applicable	1/ The 1989 Existing Condition column displays the existing resource, employment, and earnings situation on the Tongass National Forest. Resource, employment, and earnings projections 10/50/150 years into the future apply only to benchmarks, not to the 1989 Existing Condition.								





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